

decrease in salinity, while during the same period the reservoir water increased in salinity by approximately 3.4 ppm TDS. By inspection of the Los Vaqueros Project pumping operations, it is seen that much more water was diverted directly from the Old River Intake to the Contra Costa Canal during this period, bypassing the Los Vaqueros Reservoir. This produced a longer residence time in the reservoir, thus exposing the water to prolonged evaporation and a resultant increase in salinity. In Figure 15, the exceedence curves for the Los Vaqueros Reservoir show that the Delta Wetlands Project raises the salinity of the reservoir more when the salinity is very low, and the effects are not as pronounced when the reservoir salinities are relatively high.

6.2 Delta Export Water (Run 409)

3.2 The general reduction in salinity observed at the CCWD pump stations is also observed at other locations in the South Delta. Over the 70 year simulation, the water available at Clifton Court Forebay for export by the Banks Pump Station experiences an average reduction in salinity of ~~3.4~~ ppm TDS by implementation of the Delta Wetlands Project. The average calculated salinity decreases from approximately 216.7 ppm to ~~213.3~~ 213.5 ppm TDS. Again, the change in salinity fluctuates over time with the greatest benefit being a ~~53~~ 47 ppm TDS reduction in salinity, and the worst month exhibiting a ~~64~~ 51 ppm TDS increase in salinity. Figure 16 is a plot of the salinity of the water in Clifton Court Forebay both with and without the Delta Wetlands Project. The exceedence curves plotted in Figure 17 show that this general reduction in salinity is experienced across the entire range of salinities experienced at Clifton Court Forebay.

6.3 Daily Salinities (Run 409)

In order to gain a better understanding of the Delta's short term response to the operations of the Delta Wetlands Project, daily salinity values were examined. Monthly flows are input into the FDM for simulations, but the model actually operates on a time step of 15 minutes. Both daily-averaged and monthly-averaged salinities are computed and saved as output. The years 1925-1928 and 1975-1978 were chosen as representative years to study on a daily basis.

The overall trends observed on a monthly-averaged basis are also demonstrated in the daily salinity values. Figures 18-22 are plots for the locations of Rock Slough, Old River near Highway 4, and near Holland Tract, which are all in the immediate vicinity of the Delta Wetlands Project. These figures show that there is generally a reduction in the salinity of the channel water during periods of no Delta Wetlands operations and that there are larger reductions in the salinity during Delta Wetlands releases. Likewise, during periods of high DW diversions there are increases in salinity of the channel water. Figure 21 and 22 are graphs of the salinities at Jersey Point and Pittsburg, respectively. These plots show that Delta Wetlands operations typically reduce salinity during the low flow periods when salinity is high, and only raise the salinity by diverting water when the Delta is fresh or freshening. Figures 23-27 are the same five figures repeated for the years 1975-1978 and illustrate the same trends seen during the years 1925-1928.